

Section III:
AMENDMENT UNDER 37 CFR §1.121 to the
DRAWINGS

No amendments or changes to the Drawings are proposed.

Section IV:
AMENDMENT UNDER 37 CFR §1.121
REMARKS

Telephone Interview Request

Applicants' agent, Robert H. Frantz, requests a telephone interview with the examiner following examiner's consideration of this reply and amendment in order to facilitate clarification of any of the remarks or amendments made herein, and to consider any suggestions from the examiner in order to place this case in condition for allowance. Applicants' agent requests the examiner to contact him at 405-812-5613 to indicate a date and time when the examiner would be available to receive a telephone call.

Rejections under 35 U.S.C. 103

In the Office Action, the previous rejections have been withdrawn, and new rejections of claims 1 - 21 under U.S.C. 103(a) as being unpatentable over Johnson (previously cited) in view of US Patent 6,389,402 to Ginter (hereinafter "Ginter") were made. In the rationale for the rejections, it was stated that Johnson fails to teach Applicant's claimed seal status indicator, and bid repository system which matches parameters of a Broker Profile Matrix to send only unsealed bids to an intermediary third party (e.g. Applicant's traders).

While the disclosure of Ginter is substantial in size, col. 302 line 62 - col. 303 line 24, and col. 284 lines 1 - 26, were specifically cited as teaching these aspects of Applicants' claims, and it was proposed that it would have been obvious to modify Johnson to incorporate the teachings of Ginter at the time Applicant's invention was made.

"Sealed Contracts" are not the same as "Sealed Bids"

In one portion of Ginter, the term "sealed" is used in conjunction with the consummation of a contract between an offeror and a bidder (e.g. "sealing the deal"):

... The offer is **sealed** by both parties "signing" a new PERC that describes the results of the final negotiation (unrestricted rights, with release of user information, for \$5.50). The new PERC may be used by the owner of Process A to read the content (the book) subject to the described terms and conditions. (Ginter, emphasis added by applicant)

This interpretation of this term is consistent with Ginter's immediately foregoing description of an automated negotiation process (processes A and B) which result in meeting of terms between an electronic book rights offeror and a party wishing to read the electronic book. It is also consistent with one definition of the term "seal" as evidenced by Black's Law Dictionary (1991):

Contract under Seal: For centuries before the doctrine of consideration was developed, and long before informal contracts were enforced, contracts under seal were enforced. The sealed instrument required no consideration. The required formalities are" a sufficient writing, a seal, and delivery. . . .

By "sealed bid", Applicant means a bid to purchase something where the details of the bid (e.g. price, quantity, etc.) are kept confidential or secret until all competing bids have been collected. Following the close of the bidding period, all sealed bids are opened, compared, and a winning bid is selected by the party offering to sell the something. This interpretation is consistent with Applicant's disclosure and previous arguments, as well as with Black's Law Dictionary (1991):

Sealed bid. A method for submitting a bid to buy or to perform work on a proposed contract. IN general, each party interested submits a bid in a sealed envelope, and all such bids are opened at the same time and the most favorable responsible bid is accepted.

In view of these facts and definitions, Ginter in this portion of their disclosure does not disclose any operations relative to "sealed bids".

"Sealed" Electronic Products Are Not the Same as "Sealed Bids"

Elsewhere in Ginter's disclosure, the term "seal" and "sealed" is also used to describe protection of the electronic information to which bidders want rights. Ginter has given examples such as electronic data regarding stock price bidding and analysts reports, and electronic books. These are the "products" or the "something" which a bidder wishes to purchase, or more accurately, to which the bidder wishes to acquire rights to read, copy, see, etc. This is what

Ginter describes a "secret content", which is traditionally conveyed in "sealed envelopes, locked brief cases, etc.". The question to resolve is whether or not this disclosure anticipates electronically sealing bids, not the products for which the bids relate.

Ginter specifically illustrates "sealing" or protecting the offered products, not the bids, as follows:

Cryptographic Sealing

Sealing is used to protect the integrity of information when it may be subjected to modifications outside the control of the PPE 650, either, accidentally or as an attack on the VDE security. Two specific applications may be the computation of check values for database records and the protection of data blocks that are swapped out of an SPE 500.

There are two types of sealing: keyless sealing, also known as cryptographic hashing, and keyed sealing. Both employ a cryptographically strong hash function, such as MD5 or SHA. Such a function takes an input of arbitrary size and yields a fixed-size hash, or "digest." The digest has the property that it is infeasible to compute two inputs that yield the same digest, and infeasible to compute one input that yields a specific digest value, where "infeasible" is with reference to a work factor based on the size of the digest value in bits. If for example, a 256-bit hash function is to be called strong, it must require approximately on average 10^{38} (2^{128}) trials before a duplicated or specified digest value is likely to be produced.

Keyless seals may be employed as check values in database records (e.g., in PERC 808) and similar applications. A keyless seal may be computed based on the content of the body of the record, and the seal stored with the rest of the record. The combination of seal and record may be encrypted to protect it in storage. If someone modifies the encrypted record without knowing the encryption key (either in the part representing the data or the part representing the seal), the decrypted content will be different, and the decrypted check value will not match the digest computed from the record's data. Even though the hash algorithm is known, it is not feasible to modify both the record's data and its seal to correspond because both are encrypted.

Keyed seals may be employed as protection for data stored outside a protected environment without encryption, or as a validity proof between two protected environments. A keyed seal is computed similarly to a keyless seal, except that a secret initial value is logically prefixed to the data being sealed. The digest value thus depends both on the secret and the data, and it is infeasible to compute a new seal to correspond to modified data even though the data itself is visible to an attacker. A keyed seal may protect data in storage with a single secret value, or may protect data in transit between two environments that share a single secret value.

The choice of keys or keyless seals depends on the nature of the data being protected and whether it is additionally protected by encryption.

Ginter discloses these types of cryptographic data protection schemes because Ginter's system distributes the product to the intermediary party. To prevent the intermediary from unauthorized distribution, Ginter discloses distribution integers which are decremented each time the encrypted book, stock analysts reports, etc., are distributed another step in the distribution chain. Ginter's system, however, negotiates for the *rights* or permission to decrypt the "sealed" product. Sealing the product which is the object of the negotiation is not the same as sealing the bids during the bid collection and selection process.

Thus, Ginter does not disclose "sealed bids", but instead discloses "sealed electronic products", the access rights to which are offered through a bidding and negotiation process.

Multi-stage Negotiation Process is Not the Same as Sealed Bidding Process

As previously shown by the definition of "sealed bid", and consistent with Applicant's disclosure, a sealed bid offering process is a single-stage process. In other words, the product description is put out to the bidders, along with any bidding requirements (e.g. financial ability to pay, minimum bid price and/or quantities, etc.) The bidders then submit their sealed bids by a deadline, and the bidding process stops (e.g. there are not further rounds of counter-offer, counter bid, etc.) After this single stage of offering and bidding, the bids are unsealed, evaluated, and a winning bid is selected.

Ginter's system, however, is a multi-stage, automated negotiation process which does not lend itself to being a single-stage sealed bid system or process. In fact, Ginter's intermediary party is described as a "trusted negotiator", and the multi-stage negotiation involves each party making counter-offers and counter-bids until an agreement is reached, or it is apparent no agreement can be reached, each party using a set of rules to successively modify their offer or bid (emphasis added by applicants):

In "**trusted negotiator**" negotiations, all parties provide their demands and preferences to a "trusted" negotiator and agree to be bound by her decision. This is similar to binding arbitration in today's society. VDE enables this mode of negotiation by providing an environment in which a "trusted" negotiation service may be created. VDE provides not only the mechanism by which demands, desires, and limits may be concisely specified (e.g., in PERCs), but in which the PERCs may be securely transferred to a "trusted"

negotiation service along with a **rule set** that specifies **how the negotiation will be conducted**, and by providing a secure execution environment so that the negotiation process may not be tampered with.

. . . The negotiation processes may exchange information about their control sets, and **may make demands and counter proposals** regarding using their individual rule sets. For example, negotiation process A may communicate with negotiation process B to negotiate rights to read a book. Negotiation process A specifies that it will pay not more than \$10.00 for rights to read the book, and prefers to pay between \$5.00 and \$6.00 for this right. Process A's rule set also specifies that for the \$5.00 option, it will permit the release of the reader's name and address. Process B's rule set specifies that it wants \$50.00 for rights to read the book, and will provide the book for \$5.50 if the user agrees to release information about himself. The negotiation might go something like this:

<u>Process A</u>	<--->	<u>Process B</u>
Want (right to read, unrestricted) --->		
		<--- Have(right to read, unrestricted, \$50)
Offer (right to read, tender user info) --->		
		<--- Have(right to read, tender user info, \$5.50)
Accept(right to read, tender user info, \$5.50) --->		

In the above example, process A first specifies that it desires the right to read the book without restrictions or other information release. This starting position is specified as a rights option in the PERC that process A is using as a rule. Process B checks its rules and determines that an unrestricted right to read is indeed permitted for a price of \$50. It replies to process A that these terms are available. Process A receives this reply and checks it against the control set in the PERC it uses as a rule base. The \$50 is outside the \$10 limit specified for this control set, so Process A cannot accept the offer. It makes a counter offer (as described in another optional rights option) of an unrestricted right to read coupled with the release of the reader's name and address. The name and address fields are described in a DTD referenced by Process A's PERC. Process B checks its rules PERC and determines that an unrestricted right to read combined with the release of personal information is a permitted option. It compares the fields that would be released as described in the DTD provided by Process A against the desired fields in a DTD in its own PERC, and determines an acceptable match has occurred. It then sends occurred. It then sends an offer for unrestricted rights with the release of specific information for the cost of \$5.50 to Process A. Process A compares the right, restrictions, and fields against its rule set and determines that \$5.50 is within the range of \$5-\$6 described as acceptable in its rule set. It accepts the offer as made. **The offer is sealed by both parties "signing" a new PERC** that describes the results of the **final negotiation** (unrestricted rights,

with release of user information, for \$5.50). The new PERC may be used by the owner of Process A to read the content (the book) subject to the described terms and conditions.

This example clearly illustrates multi-stage negotiation, which is not within the scope of a sealed bidding process because sealed bidding processes are single-stage processes.

Johnson, also, describes a multi-stage auction system in which both parties, the product offeror and the parties wishing to purchase the products, have opportunities to "adjust" their previously made bids. In a sealed bid process, no such "adjustments" are allowed.

For these reasons, Johnson in view of Ginter fail to teach handling of "sealed bids" as Applicants have claimed. Further, there would be no motivation to modify Johnson, Ginter, or both, in any manner to make them accomplish a single-stage process, such as sealed bidding, because multi-stage bidding is key to both Johnson and Ginter, and such a modification would render them undesirable for their original purposes.

Conclusion

The claims have been amended to render them more clearly distinct from the cited art, and the definitions for the terms of the claims as originally filed in our disclosure have been specifically compared to the disclosures of the cited art to illustrate the differences between the cited art and our claimed invention. The proposed combination fails to teach all of Applicants' claimed steps, elements, and limitations.

Applicant requests reconsideration and withdrawal of the rejections, and allowance of the claims.

Respectfully,

/ Robert Frantz /

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